



Massachusetts Department of Environmental Protection  
Source Water Assessment and Protection (SWAP) Report  
for  
**Fairhaven Water Department**

### What is SWAP?

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

### Susceptibility and Water Quality

Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area.

A source's susceptibility to contamination does *not* imply poor water quality.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to your water supplier's annual Consumer Confidence Reports.

**Table 1: Public Water System Information**

<i>PWS Name</i>	Fairhaven Water Department
<i>PWS Address</i>	5 Arsene Street
<i>City/Town</i>	Fairhaven, Massachusetts 02719
<i>PWS ID Number</i>	4094000
<i>Local Contact</i>	Edward Fortin, Superintendent
<i>Phone Number</i>	4094000

### Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

#### Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate Best Management Practices (BMPs) and drinking water source protection measures.

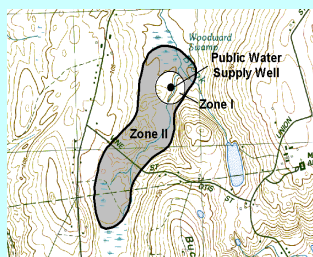
Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

#### This report includes the following sections:

1. Description of the Water System
2. Land Uses within Protection Areas
3. Source Water Protection Conclusions and Recommendations
4. Appendices

### What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone II protection area.



### Glossary

**Aquifer:** An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

**Hydrogeologic Barrier:** An underground layer of impermeable material (i.e. clay) that resists penetration by water.

**Recharge Area:** The surface area that contributes water to a well.

**Zone I:** The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. This area should be owned or controlled by the water supplier and limited to water supply activities.

**Zone II:** The primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by DEP. Refer to the attached map to determine the land within your Zone II.

## Section 1: Description of the Water System

### IWPA

*Susceptibility:* High

Well Names	Source IDs
Nasketucket Well (inactive wellfield)	4094000-01G

### Zone II #: 480

*Susceptibility:* High

Well Names	Source IDs
Mattapoisett Well (inactive wellfield)	4094000-02G

### Zone II #: 441

*Susceptibility:* High

Well Names	Source IDs
Wolf Island Road Well #1	4094000-03G
Wolf Island Road Well #2	4094000-04G
Wolf Island Road Well #3	4094000-05G

### Zone II #: 28

*Susceptibility:* High

Well Names	Source IDs
Tinkham Lane Well	4094000-06G

The Fairhaven Water Department consists of four active wells located in the town of Mattapoisett that supply drinking water to its customers in Fairhaven. The Water Department also has two inactive tubular wellfields, one located in Fairhaven and the other in Mattapoisett. All six active and inactive sources will be assessed as part of this report. The wells and wellfields are located in three Zone II recharge areas and one Interim Wellhead Protection Area (IWPA), use above table for reference. The Zone II recharge areas primarily lay within the towns of Mattapoisett and Rochester with small portions in Acushnet. Each well has a Zone I of 400 feet and each wellfield has a Zone I extending 250 feet out from the edge of the wellfield. The wells are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration. The Nasketucket wellfield is also susceptible to salt water intrusion during certain weather events or tides. Please refer to the attached maps to view the boundaries of the Zone Is and Zone II.

The Wolf Island Wells #1, #2 and #3 receive treatment to control levels of iron and manganese through a sequestration process that involves addition of metaphosphate to the water. All of the water for Fairhaven is treated for corrosion control through the addition of potassium hydroxide which raises the pH of the water. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data are also available on the web at <http://www.epa.gov/safewater/ccr1.html>.

## Section 2: Land Uses in the Protection Areas

The Zone IIs and IWPA for Fairhaven are dominated by a mixture of forest and residential land uses with smaller areas of agricultural, commercial, and light industrial land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix A.

**Key Land Uses and Protection Issues include:**

1. Inappropriate activities in Zone I
2. Residential land uses
3. Transportation corridors
4. Hazardous materials storage and use
5. Agricultural activities
6. Comprehensive wellhead protection planning
7. Oil or hazardous material contamination sites

The overall ranking of susceptibility to contamination for the system is high, based on the presence of at least one high threat land use within the water supply protection areas, as seen in Table 2.

**1. Inappropriate Activities in Zone Is** – The Zone I for each of the wells is a 400 foot radius around the wellhead or 250 feet from the edge of the wellfields. Massachusetts drinking water regulations (310 CMR 22.00 Drinking Water) requires public water suppliers to own the Zone I, or control the Zone I through a conservation restriction. The Zone Is for the four active wells are owned or controlled by the public water system, the Zone Is for the inactive wellfields are not completely controlled by the public water supplier at this time. Only water supply activities are allowed in the Zone I. However, many public water supplies were developed prior to the Department's regulations and contain non water supply activities such as homes and public roads. The following non water supply activities occur in the Zone Is of the system wells:

**Zone I: Nasketucket Well 4094000-01G (inactive)**– The Zone I contains residences and athletic fields.

**Zone I: Mattapoissett Well 4094000-02G (inactive)** – The Zone I contains local roads, cows and about ten residences with septic.

**Zone I: Wolf Island Wells #1 and #2 4094000-03G & 04G** – Zone Is contain local roads.

**Zone I Recommendations:**

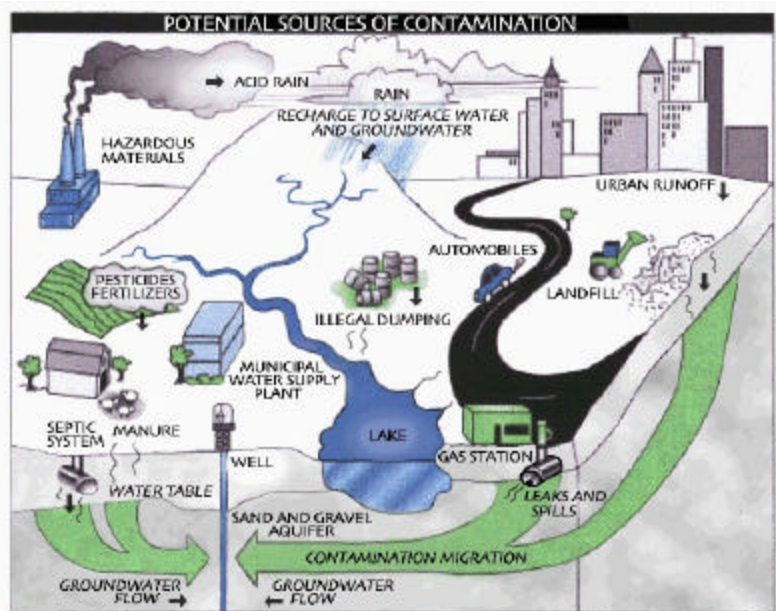
- ✓ To the extent possible, remove all non water supply activities from the Zone Is to comply with DEP's Zone I requirements.
- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
- ✓ Keep any new non water supply activities out of the Zone I.

## Benefits of Source Protection

Source Protection helps protect public health and is also good for fiscal fitness:

- Protects drinking water quality at the source
- Reduces monitoring costs through the DEP Waiver Program
- Treatment can be reduced or avoided entirely, saving treatment costs
- Prevents costly contamination clean-up
- Preventing contamination saves costs on water purchases, and expensive new source development

Contact your regional DEP office  
for more information on Source  
Protection and the Waiver  
Program.



**2. Residential Land Uses** – Residential land use is common throughout all the Zone IIs and IWPA. None of the areas have public sewers, and so all use septic systems. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination to the groundwater because septic systems lead to the ground. If septic systems fail or are not properly maintained they can be a potential source of microbial contamination.
- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (UST and AST) can be potential sources of contamination due to leaks or spills of the fuel oil they store.
- **Stormwater** – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

**Residential Land Use Recommendations:**

- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet “Residents Protect Drinking Water” available in Appendix C and on [www.mass.gov/dep/brp/dws/protect.htm](http://www.mass.gov/dep/brp/dws/protect.htm), which provides BMPs for common residential issues.
- ✓ Work with planners to control new residential developments in the water supply protection areas.
- ✓ Promote BMPs for stormwater management and pollution controls. Visit

DEP’s web site for additional information and assistance at <http://www.state.ma.us/dep/brp/wm/nonpoint.htm>.

**3. Transportation Corridors** - Route 195 runs through the Zone II for the Mattapoisett Well and Route 240 runs through the IWPA for the Nasketucket Well. Local roads are common throughout all the Zone IIs and IWPA. Roadway construction, maintenance, and typical highway use can all be potential sources of contamination. Accidents can lead to spills of gasoline and other potentially dangerous transported chemicals. Roadways are frequent sites for illegal dumping of hazardous or other potentially harmful wastes. De-icing salt, automotive chemicals and other debris on roads are picked up by stormwater and wash in to catchbasins.

**Transportation Corridor Recommendations:**

- ✓ Wherever possible, ensure that drains discharge stormwater outside of the Zone I.
- ✓ Identify stormwater drains and the drainage

(Continued on page 6)

**What are “BMPs?”**

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

**For More Information**

Contact Isabel Collins in DEP’s Lakeville Office at (508) 946-2726 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, board of health, and the town.

**Source Protection Decreases Risk**

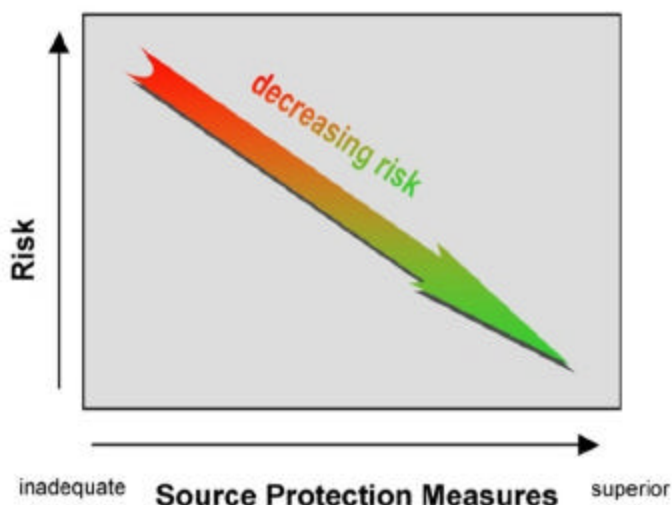


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

### Potential Source of Contamination vs. Actual Contamination

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

**Table 2: Land Use in the Protection Areas (Zones I and II)**

For more information, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area

Activities	Quantity	Threat*	Zone II or IWPA	Potential Source of Contamination
<b>Agricultural</b>				
Dairy Farms	few	M	Zone IIs	Manure (microbial contaminants): improper handling
Fertilizer Storage or Use	some	M	Zone IIs and IWPA	Fertilizers: leaks, spills, improper handling, or over-application (cranberry bogs)
Pesticide Storage or Use	some	H	Zone IIs and IWPA	Pesticides: leaks, spills, improper handling, or over-application (cranberry bogs)
<b>Commercial</b>				
Cemeteries	2	M	Zone IIs 441 & 480	Over-application of pesticides: leaks, spills, improper handling; historic embalming fluids
Sand And Gravel Mining/Washing	1	M	Zone IIs	Heavy equipment, fuel storage, clandestine dumping: spills or leaks
<b>Residential</b>				
Fuel Oil Storage (at residences)	numerous	M	Zone IIs and IWPA	Fuel oil: spills, leaks, or improper handling
Lawn Care / Gardening	numerous	M	Zone IIs and IWPA	Pesticides: over-application or improper storage and disposal
Septic Systems / Cesspools	numerous	M	Zone IIs and IWPA	Hazardous chemicals: microbial contaminants, and improper disposal
<b>Miscellaneous</b>				
Aboveground Storage Tanks	few	M	Zone IIs and IWPA	Materials stored in tanks: spills, leaks, or improper handling (includes storage of water treatment chemicals at wellsites)
Aquatic Wildlife	some	L	Zone IIs and IWPA	Microbial contaminants



**Table 2 Continued: Land Use in the Protection Areas (Zones I and II)**

For more information, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area

Activities	Quantity	Threat*	Zone II	Potential Source of Contamination
<b>Miscellaneous Continued</b>				
Fishing/Boating	some	L	Zone IIs and IWPA	Fuel and other chemical spills, microbial contaminants
Oil or Hazardous Material Sites	2	--	IWPA	Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites are
Schools, Colleges, and Universities	1	M	Zone II #480	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or storage
Transmission Line Rights-of-Way -	3	L	Zone IIs	Corridor maintenance pesticides: over-application or improper handling; construction (Gas line and electrical line easements)
Underground Storage Tanks	6	H	Zone II #441 & #480 and IWPA	Stored materials: spills, leaks, or improper handling
Transportation Corridors	2	M	Zone II #480 and IWPA	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling

**Notes:**

1. When specific potential contaminants are not known, typical potential contaminants or activities for that type of land use are listed. Facilities within the watershed may not contain all of these potential contaminant sources, may contain other potential contaminant sources, or may use Best Management Practices to prevent contaminants from reaching drinking water supplies.
2. For more information on regulated facilities, refer to Appendix A: Regulated Facilities within the Water Supply Protection Area information about these potential sources of contamination.
3. For information about Oil or Hazardous Materials Sites in your protection areas, refer to Appendix B: Tier Classified Oil and/or Hazardous Material Sites.

\* **THREAT RANKING** - The rankings (high, moderate or low) represent the relative threat of each land use compared to other PSCs. The ranking of a particular PSC is based on a number of factors, including: the type and quantity of chemicals typically used or generated by the PSC; the characteristics of the contaminants (such as toxicity, environmental fate and transport); and the behavior and mobility of the pollutants in soils and groundwater.

(Continued from page 4)

system along transportation corridors. If maps aren't yet available, work with town officials to investigate mapping options such as the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.

- ✓ Work with local emergency response teams to ensure that any spills within the Zone II can be effectively contained. Review storm drainage maps with emergency response teams.
- ✓ Work with the Town and State to best manage stormwater in the Zone II. Best management practices include street sweeping, vegetative swales, and regular catch basin inspection, cleaning and maintenance.
- ✓ Work with local officials during their review of the railroad right of way Yearly Operating Plans to ensure that water supplies are protected during vegetation control.

**4. Hazardous Materials Storage and Use** – Small areas of the Zone IIs and IWPA are zoned for commercial or industrial land uses. Activities associated with commercial and industrial land use are often the greatest concern when evaluating water supply protection. Many small businesses and industries use hazardous materials, produce hazardous waste products, and/or store large quantities of hazardous materials in UST/AST. If hazardous materials are improperly

stored, used, or disposed, they become potential sources of contamination. Hazardous materials should never be disposed of to a septic system or floor drain leading directly to the ground.

#### **Hazardous Materials Storage and Use Recommendations:**

- ✓ Educate local businesses on best management practices for protecting water supplies. Distribute the fact sheet “Businesses Protect Drinking Water” available in Appendix C and on [www.mass.gov/dep/brp/dws/protect.htm](http://www.mass.gov/dep/brp/dws/protect.htm), which provides BMP’s for common business issues.
- ✓ Work with local businesses to register those facilities that are unregistered generators of hazardous waste or waste oil. Partnerships between businesses, water suppliers, and communities enhance successful public drinking water protection practices.
- ✓ Educate local businesses on Massachusetts floordrain requirements. See brochure “Industrial Floor Drains” for more information.

**5. Agricultural Activities** – There are several cranberry bogs within the Zone IIs and some small livestock operations. Pesticides and fertilizers have the potential to contaminate a drinking water source if improperly stored, applied, or disposed. If not contained or applied properly, animal waste from barnyards, manure pits and field application are potential sources of contamination to ground and surface water.

#### **Agricultural Activities Recommendation:**

- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a US Natural Resources Conservation Service farm plan to protect water supplies.
- ✓ Work with farmers to investigate grants and loans designed to protect surface and groundwater. See <http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/EQIPFct.pdf> for more information on the USDA Environmental Quality Incentives Program (EQIP). Information on the MA Department of Food Agriculture’s Agricultural Environmental Enhancement Program (AEEP) is available on the web at <http://www.state.ma.us/dfa/programs/aEEP/>.

**6. Protection Planning** – Currently, the Fairhaven Water Department has met “Best Effort” requirements, which means the Fairhaven Water Department has

#### **Top 5 Reasons to Develop a Local Wellhead Protection Plan**

- ❶ Reduces Risk to Human Health
- ❷ Cost Effective! Reduces or Eliminates Costs Associated With:
  - ♦ Increased groundwater monitoring and treatment
  - ♦ Water supply clean up and remediation
  - ♦ Replacing a water supply
  - ♦ Purchasing water
- ❸ Supports municipal bylaws, making them less likely to be challenged
- ❹ Ensures clean drinking water supplies for future generations
- ❺ Enhances real estate values – clean drinking water is a local amenity. A community known for its great drinking water in a place people want to live and businesses want to locate.



encouraged Mattapoissett and Rochester to enact water supply protection controls that meet DEP’s Wellhead Protection regulations 310 CMR 22.21(2). Mattapoissett does have protection controls for three of their sources however, these controls do not cover all of Fairhaven’s Zone II areas. Protection planning protects drinking water by managing the land area that supplies water to a well. A Wellhead Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are resources available to help communities develop a plan for protecting drinking water supply wells.

#### **Protection Planning Recommendations:**

- ✓ Develop a Wellhead Protection Plan. Use your protection team to implement goals of plan. Refer them to <http://mass.gov/dep/brp/dws/protect.htm> for a copy of DEP’s guidance, “Developing a Local Wellhead Protection Plan”.
- ✓ Continue “Best Effort” communications with Mattapoissett officials and compare local wellhead protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21(2). If there are no local controls or they do not meet the current regulations, encourage Mattapoissett to adopt controls that meet 310 CMR 22.21(2). For more information on DEP land use controls see <http://mass.gov/dep/brp/dws/protect.htm>.

*(Continued on page 9)*

**Table 3: Current Protection and Recommendations**

Protection Measures	Status	Recommendations
<b>Zone I</b>		
Does the Public Water Supplier (PWS) own or control the entire Zone I?	<b>YES/NO</b>	Follow Best Management Practices (BMP's) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials. (Zone Is for Inactive Wells aren't completely controlled by water supplier)
Is the Zone I posted with "Public Drinking Water Supply" Signs?	<b>YES</b>	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Is Zone I regularly inspected?	<b>YES</b>	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	<b>NO</b>	Continue monitoring non-water supply activities in Zone Is.
<b>Municipal Controls</b> (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Wellhead Protection Controls that meet 310 CMR 22.21(2)?	<b>YES</b>	Fairhaven has met DEP's "Best Effort" requirements for wellhead protection. Refer to <a href="http://www.state.ma.us/dep/brp/dws/">www.state.ma.us/dep/brp/dws/</a> for model bylaws and health regulations, and current regulations.
Do neighboring communities protect the Zone II areas extending into their communities?	<b>YES/NO</b>	Continue to encourage Mattapoisett and Rochester to include all of your Zone IIs in their wellhead protection controls.
<b>Planning</b>		
Does the PWS have a Wellhead Protection Plan?	<b>NO</b>	Develop a comprehensive wellhead protection plan. Follow "Developing a Local Wellhead Protection Plan" available at: <a href="http://www.state.ma.us/dep/brp/dws/">www.state.ma.us/dep/brp/dws/</a> .
Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies?	<b>YES</b>	Augment plan by developing a joint emergency response plan with fire department, Board of Health, DPW, and local and state emergency officials. Coordinate emergency response drills with local teams.
Does the municipality have a wellhead protection committee?	<b>YES</b>	Consider expanding committee to include representatives from citizens' groups, neighboring communities, and the business community.
Does the Board of Health conduct inspections of commercial and industrial activities?	<b>YES</b>	For more guidance see "Hazardous Materials Management: A Community's Guide" at <a href="http://www.state.ma.us/dep/brp/dws/files/hazmat.doc">www.state.ma.us/dep/brp/dws/files/hazmat.doc</a>
Does the PWS provide wellhead protection education?	<b>YES</b>	Aim additional efforts at commercial, industrial and municipal uses within the Zone II.



(Continued from page 7)

- ✓ If local controls do not regulate floordrains, be sure to include floordrain controls that meet 310 CMR 22.21(2).
- ✓ Work with town boards to review and provide recommendations on proposed development within your water supply protection areas. To obtain information on build-out analyses for the town, see the Executive Office of Environmental Affairs' community preservation web site, <http://commpres.env.state.ma.us/>.

**7. Presence of Oil or Hazardous Material Contamination Sites** – The IWPA for the Nasketucket Well (inactive) contains DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 4-0000492 and 4-0011287. Refer to the attached map and Appendix B for more information.

**Oil or Hazardous Material Contamination Sites Recommendation:**

- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.

Other land uses and activities within the Zone II include sand and gravel mining and schools. Refer to Table 2 and Appendix A for more information about these land uses.

Identifying potential sources of contamination is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination. Once potential sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

### **Section 3: Source Water Protection Conclusions and Recommendations**

**Current Land Uses and Source Protection:**

As with many water supply protection areas, the system Zone IIs contain potential sources of contamination. However, source protection measures reduce the risk of actual contamination, as illustrated in Figure 2. The water supplier is commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas through:

- Ownership and control of the Zone I areas for the Water Department's active Wells.
- Meeting DEP's "Best Effort" requirements for encouraging Mattapoisett and Rochester to protect the Fairhaven Zone IIs.
- Participating on and maintaining close relationship with the Mattapoisett River Aquifer Advisory Committee and Mattapoisett Aquifer Advisory Committee.
- Along with the town of Mattapoisett, Fairhaven assesses themselves a fee where the funds are directed towards water supply protection purposes.

**Source Protection Recommendations:**

To better protect the sources for the future:

- ✓ Continue regular Zone I inspections, and when feasible, remove any non-water supply activities.
- ✓ Educate residents, businesses and farmers on ways they can help you to protect drinking water sources.
- ✓ Work with emergency response teams to ensure that they are aware of the stormwater drainage in your Zone II and to cooperate on responding to spills

#### **What is a Zone III?**

A Zone III (the secondary recharge area) is the land beyond the Zone II from which surface and ground water drain to the Zone II and is often coincident with a watershed boundary.

The Zone III is defined as a secondary recharge area for one or both of the following reasons:

1. The low permeability of underground water bearing materials in this area significantly reduces the rate of groundwater and potential contaminant flow into the Zone II.
2. The groundwater in this area discharges to a surface water feature such as a river, rather than discharging directly into the aquifer.

The land uses within the Zone III are assessed only for sources that are shown to be groundwater under the direct influence of surface water.

#### **Additional Documents:**

To help with source protection efforts, more information is available by request or online at [mass.gov/dep/brp/dws](http://mass.gov/dep/brp/dws) including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

- or accidents.
- ✓ Partner with local businesses to ensure the proper storage, handling, and disposal of hazardous materials.
- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.
- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a NRCS farm plan to protect water supplies.
- ✓ Develop and implement a comprehensive Wellhead Protection Plan.

**Conclusions:**

These recommendations are only part of your ongoing local drinking water source protection. Additional source protection recommendations are listed in Table 3, the Key Issues above and Appendix C.

DEP staff, informational documents, and resources are available to help you build on this SWAP report as you continue to improve drinking water protection in your community. Grants and loans are available through the Drinking Water State Revolving Loan Fund, the Clean Water State Revolving Fund, and other sources. For more information on grants and loans, visit the Bureau of Resource Protection's Municipal Services web site at: <http://mass.gov/dep/brp/mf/mfpubs.htm>.

The assessment and protection recommendations in this SWAP report are provided as a tool to encourage community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. The water supplier should supplement this SWAP report with local information on potential sources of contamination and land uses. Local information should be maintained and updated periodically to reflect land use changes in the Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

**Section 4: Appendices**

- A. Regulated Facilities within the Water Supply Protection Area
- B. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
- C. Additional Documents on Source Protection

**APPENDIX A: REGULATED FACILITIES WITHIN THE WATER SUPPLY PROTECTION AREA****DEP Permitted Facilities**

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
No DEP Bureau of Waste Prevention Major Facilities identified at this time.					

**Table of Underground Storage Tanks located on next page.**

## Underground Storage Tanks

Facility Name	Address	Town	Tank Material	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
AT&T ID #3146	200 MILL RD	FAIRHAVEN	Reinforced	2 Walls	Interstitial Monitoring	20000	Fuel Oil
			Reinforced	2 Walls	Interstitial Monitoring	25000	Kerosene
			Reinforced	2 Walls	Interstitial Monitoring	25000	Kerosene
			Reinforced	2 Walls	Interstitial Monitoring	25000	Kerosene
			Reinforced	2 Walls	Interstitial Monitoring	25000	Kerosene
G BOURNE KNOWLES CO INC ID #3118	267 HUTTLESTON AVE	FAIRHAVEN	Steel	1 Wall	Inventory Record-Keeping	1100	Diesel
TITLEIST AND FOOTJOY WORLDWIDE ID #1194	333 BRIDGE ST	FAIRHAVEN	*	*	*	12000	*
			*	*	*	20000	*
TOWN OF FAIRHAVEN DPW ID #3128	5 ARSENE ST	FAIRHAVEN	Cathodic	2 Walls	Interstitial Monitoring	12000	*
			Cathodic	2 Walls	Interstitial Monitoring	10000	*
MATTAPOISETT FUEL SERVICE & FOOD ID #15519	62 FAIRHAVEN RD	MATTAPOISETT	Steel	1 Wall	Inventory Record-Keeping	1000 (Above Ground)	Diesel
			Steel	1 Wall	Inventory Record-Keeping	1000 (Above Ground)	Diesel
			Composite	2 Walls	Interstitial Monitoring	12000	Gasoline
			Composite	2 Walls	Interstitial Monitoring	8000	Gasoline
			Composite	2 Walls	Interstitial Monitoring	6000	Diesel
VERIZON MASSACHUSETTS #535407 ID #892	118 NORTH AVE	ROCHESTER	Reinforced	2 Walls	Interstitial Monitoring	1000	Diesel

For more information on underground storage tanks, visit the Massachusetts Department of Fire Services web site: <http://www.state.ma.us/dfs/ust/ustHome.htm>

Note: This appendix includes only those facilities within the water supply protection area(s) that meet state reporting requirements and report to the appropriate agencies. Additional facilities may be located within the water supply protection area(s) that should be considered in local drinking water source protection planning.

\* No further information available.



## **APPENDIX B – Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas**

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at <http://www.state.ma.us/dep/bwsc>. You may obtain site - specific information two ways: by using the BWSC Searchable Sites database at <http://www.state.ma.us/dep/bwsc/sitelist.htm>, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

**Table 1:** Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN)

<b>RTN</b>	<b>Release Site Address</b>	<b>Town</b>	<b>Contaminant Type</b>
4-0011287	276 HUTTLESTON AVE	FAIRHAVEN	Oil
4-0014120	200 MILL ROAD ANX	FAIRHAVEN	Oil

For more location information, please see the attached map. The map lists the release sites by RTN.

\* Site recently classified, not reflected in current GIS map.